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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/728,795	12/08/2003	Haruyuki Suzuki	R2184.0284/P284	8928

24998 7590 02/21/2007
DICKSTEIN SHAPIRO LLP
1825 EYE STREET NW
Washington, DC 20006-5403

EXAMINER

CHOW, LIXI

ART UNIT PAPER NUMBER

2627

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	02/21/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary	Application No.	Applicant(s)	
	10/728,795	SUZUKI, HARUYUKI	
	Examiner	Art Unit	
	Lixi Chow	2627	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-19 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1,4-9,11,13,14,17 and 18 is/are rejected.
- 7) ☒ Claim(s) 2,3,10,12,15,16 and 19 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 08 December 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date ____. | 6) <input type="checkbox"/> Other: ____. |

DETAILED ACTION

1. Claims 1-19 are pending in this application.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1, 4-6, 8, 11, 13, 14 and 18 are rejected under 35 U.S.C. 102(b) as being anticipated by Kurobe et al. (USP 2002/0131350; hereafter Kurobe).

Regarding claim 1:

Kurobe discloses a recording condition determining method realized in an information recording apparatus that records information on an information recording medium using an optical beam emitted from a light source, the method comprising:

a first step of determining whether an optimal recording power of the light source is greater than a preset threshold value based on at least one of a result of test writing on the information recording medium and a result of receiving reflected light from the information recording medium during recording (see Fig. 12 and paragraph [0141]);

a second step of selecting according to a predetermined selection criterion at least one of a plurality of choices including a choice of not changing the optimum recording power, said second step being realized when it is determined in the first step that the optimum recording power exceeds the threshold value (see Fig. 12 and paragraph [0195]); and

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a third step of establishing a recording condition based on the selected choice (see Fig. 12).

Regarding claim 4:

Kurobe discloses the recording condition determining method as claimed in claim 1, wherein:

the first step includes determining whether the optimum recording power exceeds the threshold value based on the result of test writing on the information recording medium (see Fig. 12); and

the choices further include at least one of a choice of obtaining a new optimum recording power by lowering a recording speed and conducting the test writing once more and a choice of changing the optimum recording power to a predetermined value in the vicinity of the threshold value (see Fig. 12 and paragraph [0195]).

Regarding claim 5:

Kurobe discloses the recording condition determining method as claimed in claim 1 wherein:

the first step includes determining whether the optimum recording power exceeds the threshold value based on the result of receiving reflected light from the information recording medium during recording (see Fig. 12, the step where determining the write power exceeding the LD limit); and the choices further include a choice of lowering the optimal recording power by one rank (see Fig. 12, the step where it reduces the writing speed by one level).

Regarding claim 6:

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Kurobe discloses the recording condition determining method as claimed in claim 1, wherein the selection criterion corresponds to a preset criterion (see Fig. 12; all the steps are carried out as the result of a preset criterion programmed in the CPU).

Regarding claim 8:

Kurobe discloses the recording condition determining method as claimed in claim 6, wherein the selection criterion corresponds to a criterion for selecting one of the choices including the choice of not changing the optimum recording power and at least one of a choice of obtaining a new optimum recording power by lowering a recording speed and conducting the test writing once more, a choice of changing the optimum recording power to a predetermined value in the vicinity of the threshold value, and a choice of lowering the optimum recording power by one rank (see Fig. 12).

Regarding claims 11 and 13:

Claims 11 and 13 recite similar limitations as in claim 1; hence, claims 11 and 13 are rejected under the same reasons set forth in claim 1.

Regarding claim 14:

Kurobe discloses an information recording apparatus (see Fig. 1) that is adapted to record information on an information recording medium using an optical beam emitted from a light source, said apparatus comprising:

recording power obtaining means for obtaining an optimal recording power of the light source based on at least one of a result of test writing on the information recording medium and a result of receiving reflected light from the information recording medium while recording information (see Fig. 1 and Fig. 12; the optical pickup 5 includes a

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photodetector that detects the optimal recording power of the light source during OPC operation);

determination means for determining whether the optimum recording power exceeds a preset threshold value (see Fig. 1; the CPU 16 determines whether the optimum recording power exceeds the LD limit);

selection means for selecting according to a predetermined selection criterion at least one of a plurality of choices including a choice of not changing the optimal recording power, said selection means being realized when it is determined by the determination means that the optimal recording power exceeds the threshold value (see Fig. 12 and paragraph [0195]); and

establishing means for establishing a recording condition based on the selected choice (see Fig. 12).

Regarding claim 18:

Claim 18 recite similar limitations as in claim 14; hence, claim 18 is rejected under the same reasons set forth in claim 14. In addition, Kurobe discloses the information recording apparatus/system further comprising: an information processing apparatus that is adapted to control said information recording apparatus (see paragraph [0044]; the host computer is the information processing apparatus).

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 7, 9 and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kurobe et al. (USP 2002/0131350; hereafter Kurobe).

Regarding claim 7:

Kurobe discloses the recording condition determining method, wherein a selection criterion corresponds to a criterion set according to an external input (see paragraph [0156]). However, Kurobe fails to disclose a choice inputted by an external device corresponds to an adjustment of optimum recording power. Instead, Kurobe discloses a choice inputted by an external device corresponds to an adjustment of optimum recording speed. The adjustment made to recording speed is an art recognized equivalent of an adjustment made to the recording power, because both methods influence the quality of the recorded information.

At the time the invention was made, it would have been obvious to a person of ordinary skill to modify the recording condition determining method of Kurobe, so that the control of the optimum recording power can be externally inputted. A person of ordinary skill would have been motivated to do this, because the user has a greater flexibility as to how to control the recording condition.

Regarding claim 9:

Kurobe discloses the recording condition determining method, wherein the selection criterion corresponds to a criterion for selecting one of the choices including the choice of not changing the optimum recording power and at least one of a choice of obtaining a new optimum recording power by lowering a recording speed and conducting the test writing once more, a choice of changing the optimum recording power to a

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predetermined value in the vicinity of the threshold value, and a choice of lowering the optimum recording power by one rank (see Fig. 12).

Regarding claim 17:

Kurobe discloses the information recording apparatus, further comprising notification means for notifying an external apparatus of a determination result (see paragraph [0044]). However, Kurobe fails to disclose the notification means for notifying the result of the determination means. Instead, Kurobe discloses displaying a determination result of whether the writing speed is higher than the optimum writing speed.

At the time the invention was made, it would have been obvious to a person of ordinary skill in the art to modify the information recording apparatus of Kurobe, so that the notification means informs the external apparatus of a determination result of the determination means. A person of ordinary skill in the art would have been motivated to do this, because user can be notified when the optimum recording power exceeds the preset threshold value.

Allowable Subject Matter

6. Claims 2, 3, 10, 12, 15, 16 and 19 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

In regards to claims 2 and 12, none of the reference of record alone or in combination disclose or suggest the selection criterion corresponds to a criterion of selecting the choice of **not changing the optimum recording power if an estimation of**

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an influence on a service life of the light source does not exceed a predetermined level.

In regards to claim 10, none of the reference of record alone or in combination disclose or suggest **a fourth step of storing hysteresis information including the optimum recording power and a light emission time of the light source at said optimum recording power, said fourth step being performed when the choice of not changing the optimum recording power is selected according to the selection criterion in the second step.**

In regards to claim 15, none of the reference of record alone or in combination disclose or suggest **first storage means in which hysteresis information pertaining to the light source is stored; and storing means for storing in the first storage means hysteresis information including the optimal recording power and a light emission time of the light source at said optimal recording power, said storing means being realized when the choice of not changing the optimal recording power is selected by the selection means.**

In regards to claim 16, none of the reference of record alone or in combination disclose or suggest **type information obtaining means for obtaining type information of the information recording medium; and second storage means storing information on at least one type of information recording medium of which a power margin extends over a predetermined value in the vicinity of the threshold value; wherein the choices further include a choice of changing the optimal recording power to the predetermined value in the vicinity of the threshold value; and the selection means is arranged to select the choice of changing the optimal recording power to the**

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predetermined value in the vicinity of the threshold value when the type information of the information recording medium obtained by the type information obtaining means corresponds to a type of information recording medium stored in the second storage means.

In regards to claim 19, none of the reference of record alone or in combination disclose or suggest the information processing apparatus includes a display unit that is adapted to **display the choices including the choice of not changing the optimal recording power when the optimal recording power exceeds the threshold value**, an input unit for selecting at least one of the choices displayed by the display unit, and a notification unit for notifying the information recording apparatus of the choice selected at the input unit.

Conclusion

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Sato (USP 2002/0064110) is cited, because Sato teaches an optical disk drive that compares the optimum recording power obtained as a result of the test recording with the maximum allowable output power of laser source.

Takeda (USP 2003/0043714) is cited, because Takeda disclose a method of comparing the maximum allowable power level with the standard optimum recording power.

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Lixi Chow whose telephone number is 571-272-7571. The examiner can normally be reached on Mon-Fri, 8:30am to 6:00pm.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wayne Young can be reached on 571-272-7582. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

LC 2/15/07



WAYNE YOUNG
SUPERVISORY PATENT EXAMINER